

LPS Build 3 Functional Requirements

#	SRS Requirement Summary	#	F&PS Requirement Summary
	Unallocated		
TBM	Moving Window Display	3.3.6.10	...provide a moving window display...
TBM	110% Throughput Capability	4.1.10	...at least 110% throughput capability...
TBM	125 % RAM Capacity	4.1.11	...at least 125% RAM...
TBM	125 % Peripheral Storage Capacity	4.1.12	...at least 15% peripheral storage capacity...
TBM	110% I/O Bandwidth	4.1.13	...at least 11% I/O bandwidth...
	All Subsystems		
TBM	Test LPS functions & external I/Fs	3.1.10.6	...test functions and external interfaces...
TBM	Execute Diagnostic Tests	3.1.10.7	...execute diagnostic tests...
TBM	Support End-to-End Testing	3.1.10.8	...support end-to-end testing...
		4.1.3	Process 250 scenes per day
		4.1.4	Save & Process within 16 hours or receipt
		4.1.5	Reprocess 10% of daily volume
		4.1.9	...maintain throughput with BER 10**-5
	IDPS		
5.1	Validate IDP Parameters	3.3.6.1	...modify LPS set-up tables from operator inputs
		3.3.6.6	...allow the operator to select thresholds for...errors ...
		3.3.6.7	...automatically...alert the operator of ...exceeding thresholds
5.2.1	Reduce Image by Subsamples	3.1.5	...generate LPS output files on ... subinterval basis
		3.3.2.25	...generate Image data, PCD, MSCD, CAL on SI basis
		3.3.3.1	...generate browse data...for each scene
		3.3.3.3	...generate multiband browse...from 3 predetermined bands
		3.3.3.4	...provide ...info...on browse data
		3.3.3.5	...generate browse...using a predetermined reduction factor
		4.3.4	...generate browse data with a reduction factor of 16 or better
5.2.2	Reduce Image by Wavelets	3.1.5	...generate LPS output files on ... subinterval basis
		3.3.2.25	...generate Image data, PCD, MSCD, CAL on SI basis
		3.3.3.1	...generate browse data...for each scene
		3.3.3.3	...generate multiband browse...from 3 predetermined bands
		3.3.3.5	...generate browse...using a predetermined reduction factor
		4.3.4	...generate browse data with a reduction factor of 16 or better
5.4.1	Collect Scene Data	3.3.6.7	...automatically...alert the operator of ...exceeding thresholds
5.4.2	Generate Cloud Cover Assessment	3.3.4.10	...use parameterized comparison values in...ACCA
		3.3.4.8	...perform ACCA for WRS scenes
		3.3.4.9	...ACCA on...quadrant and full scene basis
		3.3.6.6	...allow the operator to select thresholds for...errors ...
		3.3.6.7	...automatically...alert the operator of ...exceeding thresholds
	LDTs		
7.5	Generate Transfer Summary Report	3.3.5.7	...generate...file(s) transfer summary...on a daily basis
7.6	Delete LPS Files	3.3.5.4	...store...files until confirmation of successful transfer...
7.6	Delete LPS Files	3.3.5.5	...manual override...to retain...files...on a specific contact period
7.6	Delete LPS Files	3.3.6.8	...capability to manually override the LPS automated functions
7.7	Retain LPS Files	3.3.5.4	...store...files until confirmation of successful transfer...
7.7	Retain LPS Files	3.3.5.6	...manual override...to delete...files...on a specific contact period
7.7	Retain LPS Files	3.3.6.8	...capability to manually override the LPS automated functions
7.8	Control Send DAN	TBM	
	MACS		
6.2	Generate Metadata	3.1.5	...generate LPS output files on ... subinterval basis
		3.3.4.11	...generate...metadata...file(s) on a subinterval basis
		3.3.4.12	...include in each LOR metadata file the following...on a scene basis
		3.3.4.13	...include in each LOR metadata file the following...on a SI basis
		3.3.4.14	...include...PCD QA data on a scene basis
		3.3.4.15	...include...PCD processed PCD QA data, on a scene basis
		3.3.4.16	...include...the following for each WRS...scene
6.3	Report LPS Status	3.1.19	...provide monitoring test points ...
6.4	Display or Print LPS Report	3.3.6.3	...collect and report LOR QA...on a subinterval basis

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		3.3.6.4	...display QA data upon operator request
		3.3.6.5	...print QA data upon operator request
6.5	Modify LPS Configuration	3.1.14	...capability to configure system resources...
6.6	Modify Contact Schedule	3.3.6.1	...modify LPS set-up tables from operator inputs
6.7	LPS System Control	3.1.10	...interactive intervention capability...
		3.1.10.1	...system start-up...
		3.3.6.9	...enable/disable...receive data, L0R, transfer
TBM	IAS Parameter Ingest	3.2.4	...interace with the IAS...
TBM	System shutdown	3.1.10.2	...provide system shutdown capab ility.
MFPS			
3.1	Validate MFP Parameters	3.3.6.1	...modify LPS set-up tables from operator inputs
3.7	Generate Level 0R QA Report	3.1.7	...L0R QA on a...subinterval basis for each... input
		3.3.6.3	...collect and report L0R QA...on a subinterval basis
PCDS			
4.1	Validate PCD Parameters	TBM	
4.4.3	Determine WRS Scene Coordinates	4.3.5	...identify WRS scene within 30 meters
4.4.4	Compute Horizontal Display Shift	TBM	
4.4.5	Calculate Sun Position	TBM	
4.4.6	Report Scene Info	TBM	
RDCS			
1.1	Receive Raw Wideband Data	3.3.1.1	...receive return link...from the LGS on a contact period basis
		3.3.1.2	...receive return link...on an LGS output channel basis
		3.3.1.3	...store ...wideband data...on a contact period basis
		3.3.1.4	...store ... wideband data on an LGS output channel basis
		3.3.1.12	...maintain ...receipt capability...during anomalies
		3.3.6.8	...capability to manually override the LPS automated functions
		3.3.6.9	...enable/disable...receive data, L0R, transfer
1.2	Save Raw Wideband Data	3.3.1.7	...capability to record...data...to removable ... media
		3.3.1.8	...save removable storage media...
		3.3.6.8	...capability to manually override the LPS automated functions
1.3	Restage Raw Wideband Data	3.3.1.9	...retrieve...data...from removable storage media
		3.3.6.8	...capability to manually override the LPS automated functions
1.4	Generate Data Receive Summary Report	3.3.1.10	...generate data receive summary report...
1.5	Delete Raw Wideband Data	3.3.1.1	...receive return link...from the LGS on a contact period basis
		3.3.1.2	...receive return link...on an LGS output channel basis
		3.3.1.3	...store ...wideband data...on a contact period basis
		3.3.1.4	...store ... wideband data on an LGS output channel basis
TBM	Interface with LGS	3.2.1	...interface with the LGS to receive wideband data...
RDPS			
2.1	Validate RDP Parameters	3.1.6	...return link QA on a...contact period basis for each... input
		3.1.10.3	...system shutdown...
		3.1.11	...provide the capability to control LPS operations
		3.1.12	...provide the capability to monitor LPS operations
		3.3.6.1	...modify LPS set-up tables from operator inputs
		3.3.6.8	...capability to manually override the LPS automated functions
		4.1.6	L0R at average aggrate rate of 12 Mbps
2.6	Compute BER	3.1.4	...process...on a contact period...basis
		3.1.6	...return link QA on a...contact period basis for each... input
		3.1.10.3	...system shutdown...
		3.1.12	...provide the capability to monitor LPS operations
		3.3.2.13	...collect and store ...return link QA...for each contact
		3.3.6.2	...collect & report ...return link QA...on a contact period basis
		4.1.6	L0R at average aggrate rate of 12 Mbps
2.7	Generate Return Link QA Report	3.1.6	...return link QA on a...contact period basis for each... input
		3.3.6.2	...collect & report ...return link QA...on a contact period basis
		4.1.6	L0R at average aggrate rate of 12 Mbps